

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A golf ball comprising a core and a cover, wherein the cover is cast from a castable reactive acrylate functional composition comprising:
a saturated polyurethane backbone;
at least one acrylate functional component reacted with the saturated polyurethane backbone; and
at least one free radical initiator.
2. (Original) The golf ball of claim 1, wherein the at least one acrylate functional component is selected from the group consisting of monofunctional, difunctional, trifunctional, tetrafunctional, and pentafunctional monomers and oligomers, and combinations thereof.
3. (Canceled)
4. (Withdrawn) The golf ball of claim 1, wherein the at least one acrylate functional component is selected from the group consisting of water dispersible monomers, adhesion promoting monomers, pigment dispersing monomers, fire retarding monomers, metallic diacrylate, metallic dimethacrylate, epoxy acrylates, epoxy methacrylates, acrylate half esters, methacrylate half esters, polybutadiene acrylates, and combinations thereof.
5. (Original) The golf ball of claim 1, wherein the at least one acrylate functional component has a viscosity of about 100 cP or greater.
6. (Original) The golf ball of claim 1, wherein the at least one free radical initiator

comprises at least one peroxide.

7. (Original) The golf ball of claim 1, wherein the at least one free radical initiator comprises at least one azo compound.
8. (Original) The golf ball of claim 6, wherein the at least one free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, di(2-t-butyl-peroxyisopropyl)benzene peroxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, dicumyl peroxide, di-t-butyl peroxide, 2,5-di-(t-butylperoxy)-2,5-dimethyl hexane, n-butyl-4,4-bis(t-butylperoxy)valerate, lauryl peroxide, benzoyl peroxide, t-butyl hydroperoxide, and mixtures thereof.
9. (Original) The golf ball of claim 1, further comprising an intermediate layer.
10. (Original) The golf ball of claim 9, wherein the intermediate layer comprises an ionomeric material.
11. (Original) The golf ball of claim 1, wherein the golf ball further comprises at least one top coat disposed about the cover.
12. (Original) The golf ball of claim 11, wherein the cover has a thickness of about 50 μm or greater.
13. (Original) The golf ball of claim 12, wherein the cover has a thickness of about 0.2 inches to about 0.035 inches.

14. – 31. (Canceled)

32. (Previously Presented) A golf ball comprising at least one cover layer formed from an acrylate functional composition comprising:

- a polyurethane backbone formed from the reaction of at least one isocyanate and at least one polyol;
- at least one unsaturated acrylate functional segment reacted with the polyurethane backbone; and
- at least one free radical initiator.

33. (Previously Presented) The golf ball of claim 32, wherein the at least one unsaturated acrylate functional segment comprises hydroxy-terminated acrylates, amine-terminated acrylates, or mixtures thereof.

34. (Previously Presented) The golf ball of claim 33, wherein the at least one acrylate functional segment comprises hydroxy-terminated acrylate, hydroxy-terminated methacrylate, hydroxy-terminated methyl methacrylate, hydroxy-terminated ethyl acrylate, hydroxy-terminated ethyl methacrylate, hydroxy-terminated butyl acrylate, hydroxy-terminated butyl methacrylate, hydroxy-terminated glycidyl acrylate, hydroxy-terminated glycidyl methacrylate, or mixtures thereof.

35. (Previously Presented) The golf ball of claim 32, wherein the at least one free radical initiator comprises at least one peroxide.

36. (Previously Presented) The golf ball of claim 35, wherein the at least one free radical initiator comprises di-t-amyl peroxide, di(2-t-butyl-peroxyisopropyl)benzene peroxide, 1,1-bis(t-butylperoxy)-3,3,5-trimethylcyclohexane, dicumyl peroxide, di-t-butyl peroxide, 2,5-di-(t-butylperoxy)-2,5-dimethyl hexane, n-butyl-4,4-bis(t-butylperoxy)valerate, lauryl peroxide, benzoyl peroxide, t-butyl hydroperoxide, or mixtures thereof.

37. (Previously Presented) The golf ball of claim 35, wherein the at least one free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-

ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, and mixtures thereof.

38. (Canceled)

39. (Canceled)

40. (Currently Amended) The golf ball of claim [[39]] 32, wherein the at least one unsaturated acrylate functional segment comprises epoxy acrylates, epoxy methacrylates, acrylate half esters, methacrylate half esters, polybutadiene acrylates, urea acrylates, and combinations thereof.

41. (Previously Presented) A golf ball comprising a core, an inner cover, and an outer cover, wherein at least one of the inner cover or outer cover is formed from an acrylate functional composition comprising:

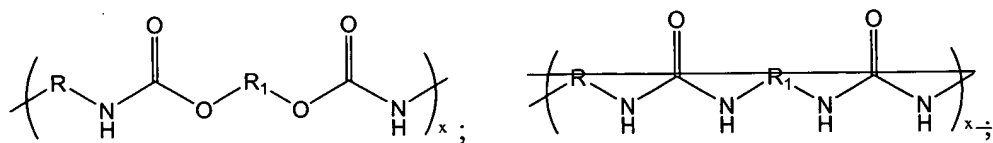
- a polyurethane backbone formed from the reaction of at least one isocyanate and at least one hydroxy-terminated compound;
- at least one unsaturated acrylate functional segment reacted with the polyurethane backbone; and
- at least one free radical initiator.

42. (Currently Amended) The golf ball of claim 41, wherein the at least one unsaturated acrylate functional segment comprises hydroxy-terminated acrylate, hydroxy-terminated methacrylate, hydroxy-terminated methyl methacrylate, hydroxy-terminated ethyl acrylate, hydroxy-terminated ethyl methacrylate, hydroxy-terminated butyl acrylate, hydroxy-terminated butyl methacrylate, hydroxy-terminated glycidyl acrylate, hydroxy-terminated glycidyl methacrylate, or mixtures thereof.

43. (Previously Presented) The golf ball of claim 41, wherein the at least one unsaturated acrylate functional segment comprises hydroxy-terminated acrylates, amine-terminated acrylates, or mixtures thereof.

44. (Canceled)

45. (Currently Amended) The golf ball of claim 41, wherein the polyurethane backbone comprises linkages having the general ~~formulae~~ formula:



or a mixture thereof, wherein x is the chain length, *i.e.*, about 1 or greater, and wherein R and R₁ are straight chain or branched hydrocarbon chains having about 1 to about 20 carbons, and wherein the linkages form greater than about 10 percent of the polyurea backbone.

46. (Canceled)

47. (Previously Presented) The golf ball of claim 41, wherein the acrylate functional composition is present in the outer cover layer.

48. (Previously Presented) The golf ball of claim 41, wherein the at least one free radical initiator is selected from the group consisting of di-t-amyl peroxide, tert-amyl peroxy-2-ethylhexyl carbonate, t-amyl peroxyacetate, ethyl 3,3-D (t-amylperoxy) butyrate, 2,2-di-(t-amylperoxy) propane, t-amyl perbenzoate, and mixtures thereof.

49. (Canceled)

Please add the following new claims:

50. (New) The golf ball of claim 1, wherein the castable reactive acrylate functional composition consists essentially of the saturated polyurethane backbone, the at least one acrylate functional component, and the at least one free radical initiator.

51. (New) The golf ball of claim 32, wherein the acrylate functional composition consists essentially of the polyurethane backbone, the at least one unsaturated acrylate functional segment, and the at least one free radical initiator.

52. (New) The golf ball of claim 41, wherein the acrylate functional composition consists

essentially of the polyurethane backbone, the at least one unsaturated acrylate functional segment, and the at least one free radical initiator.